

# **YORQUIP SNAKE PRO SP55 GASOLINE DEMOLITION HAMMER**



## **INSTRUCTION MANUAL**

## User Manual

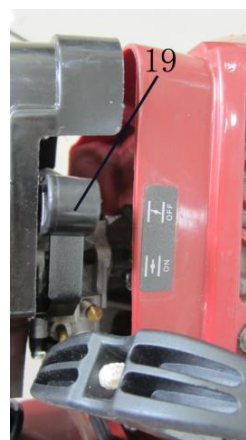
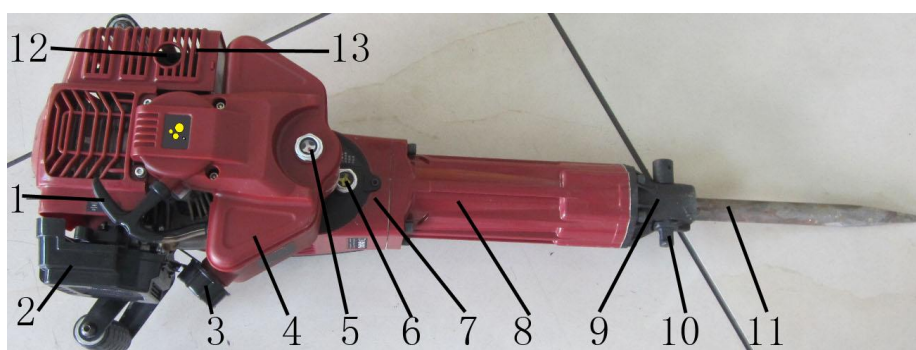
Thanks for choosing our YorQuip Snake Pro SP55 gasoline demolition hammer. This new-generation demolition hammer is the lightest weight in the world, lowest displacement of small construction machinery. It can crush, tamp, and compact with multifunctional hand-held tools. And also it can easy rotate. Snake Pro SP55 surpasses conventional design and brings significant and economic benefits to the user. It has energy saving, and the advantages of easy to use. Reasonable maintenance measures can bring this new-generation demolition hammer work efficiency, longer life to the maximum. For your safety, please follow the instructions on the safe operation of the rules of operation and technical maintenance, or will cause harm to your personal safety or damage the machine.

## Directory

I	Name of major part.....	(2)
II	Instruction of safe operation.....	(2)
III	Main use and feature.....	(4)
IV	Preparatory work before use.....	(4)
V	Start.....	(6)
VI	Run.....	(6)
VII	Stop machine.....	(6)
VIII	Technical maintenance.....	(6)
IX	Failure analysis and trouble method.....	(8)
X	Product key data.....	(9)
XI	Maintenance cycle.....	(10)
XII	Part list of Snake Pro SP55 demolition hammer.....	(11)
XIII	Contact data.....	(13)

## I Name of major part

No.	Parts Name	No.	Parts Name	No.	Parts Name
1	Starter	2	Air Filter	3	Tank Cap
4	Oil Tank	5	Oil Standard	6	Gearbox Standard
7	Gearbox	8	Cylinder Block	9	Drill Seat
10	Drill Lock	11	Drill	12	Muffler
13	Protect Cover	14	Handle Bar	15	Spark Plug
16	Oiler Cover	17	Flameout Button	18	Gearbox Cover
19	Ventilation Door				



## II Instruction of safe operation

1. The operator need wear slip-resistant safety shoes. Appropriate clothing. Wear goggles and helmet, wear earplugs for a long time operation.
2. Balance body when you operation the machine. Operating the machine in a right position.
3. Prohibit smoking when you operate the machine.
4. When you lift machine, the first control you need dial to reach the minimum scale, let the machine to slow down.
5. Tell idlers away from the work area avoid injury. The process of using machine may lead to gravel flying to idler.
6. Select medium-speed gasoline demolition hammer to run for the best. Control dial to between 3 to 4 in scale.

7. In the use of operation, the operator is not equal to the greater pressure crushing, tamping, compacting faster, try to use the weight of the machine itself, the force should be reasonable in order to achieve high efficiency and easy operation results.
8. Gasoline demolition hammer for crushing, tamping, compacting work, the work cannot be used to pry the stone.
9. Maintain the handles dry, clean, no oil or fuel mixture.
10. Stop the operation midway; you must turn off the engine.
11. Every time please check normal fastening screws of the connector before using. If loose, you must tighten the screws to use.
12. Prohibition only pure gasoline (without two-stroke engine oil) for fuel.
13. Gasoline is highly flammable, so to refuel in a well ventilated environment. When you add oil, please stop gasoline engine.
14. Do not add oil too full, do not leave the fuel filler in neck part of machine. If overflow or spilled fuel .wait the fuel all volatilize, then you can start machine.
15. After refueling, tighten the oil lid. Please check frequently whether the fuel tank is damaged to leak, if found damaged replace immediately.
16. Reserve oil in storage areas. Remove all the root causes of fire or cause sparks.
17. In closed areas, such as tunnels, trenches and deep groove in the work environment when using gasoline demolition hammer to ensure sufficient fresh air, exhaust gas containing carbon monoxide dangers, should bring electric fan for air flow.
18. Forbid quickly accelerate or brake, so as not to damage the machine.
19. Avoid the impact of fragmentation work against the machine in the context of high speed operation.
20. Transfer site long-distance transport, should be emptying the tank.
21. Prohibit substandard maintenance staff dismount gasoline hammer, to avoid structural damage to parts, resulting in shortened life of gasoline demolition hammer and accidents.



Pic.1 Right



Pic.2 Wrong

### III Main use and feature

#### Use

- 1 It can use on building construction, road building project in the broken.
- 2 Break cornerstone for the railway road and tamp sleepers work.
- 3 Power embedded in the telecommunications cables broken ditching work
- 4 In cold water and ice breaking region, do ice-breaking work with digging shovel.

#### Features

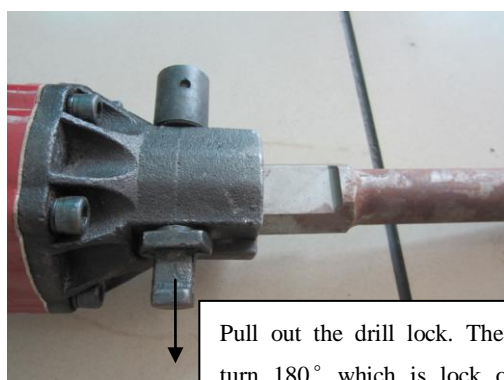
- 1 It is the world's lightest weight, lowest displacement engine type handheld demolition hammer.
- 2 A perfect body and "V" linear operation, minimizing the hands of vibration, has significant control of convenience and comfortable, the operator can shovel digging a 360 degree rotation.
- 3 It can regulate the number of impact energy and impact, apply for a variety of materials suitable for construction.
- 4 Applications: Our machine is suit in many kinds of situations, such as crashing project in road-building, electric power, telecom, and cable, ditch.

Advantage: If you use YorQuip Snake Pro SP55, then you can ignore the trouble of the heavy equipments like diesel engine, air compressor, trucking-lorry, which will not limited by the pipe line, electric line, cable no matter how high and how far, we can work in kinds of environment.

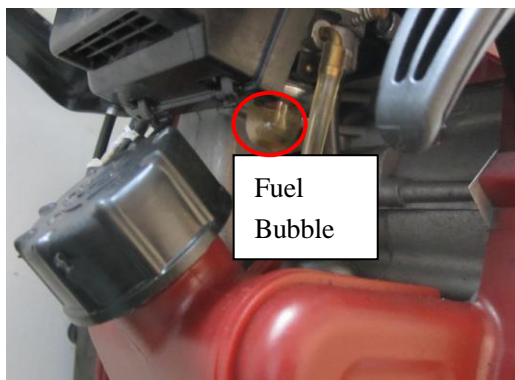
### IV Prepared work before using

#### Installation

1. Lubricating the drill.
2. Pull out the drill lock, insert the drill into the drill seat then make sure locked up the drill.



Pic.3



Pic.4

#### Fuel

The general gasoline and the two-stroke oil mix.

Recommended mixing ratio

Conditions	gasoline :engine oil
Work within 20 hours	20:1
Work after 20 hours	25:1

1. Prohibit the use of pure gasoline (no refueling two-stroke engine oil )for fuel

2. Well-ventilated place to add fuel
3. Do not add too full fuel in the fuel tank. Do not leave fuel in the neck. If any fuel spill, please completely remove or evaporate before starting the gasoline engine
4. After refueling, tighten the fuel tank cap.

### **Grease**

We recommend adding 50g dedicated grease after 40 hours of accumulative use.

- 1.The kind of grease:

NLGI 1.5# 2#

Drop point  $^{\circ}\text{C} \geq 260$

Steel wire oil separate test ( $100^{\circ}\text{C}$ , 24h.)%  $\leq 0.86$

Corrosion (45#Steel  $100^{\circ}\text{C}$  3h) : PASS

Evaporativity( $120^{\circ}\text{C}$ )  $\%(\text{m/m}) \leq 2.0$

Four ball test PBN  $\geq 1000$

PDN  $\geq 3000$

Base oil kinematic viscosity( $40^{\circ}\text{C}$ ), $\text{mm}^2/\text{s}$  : 150

Applicable temperature :  $-30^{\circ}\text{C}$ —  $200^{\circ}\text{C}$

2. The total capacity of grease tank is 140ml. We suggest add the engine oil to 100ML.
3. When the grease is less than the red point of the gearbox standard, please add the grease. After work 30 hours, please note the oil position. (See Pic.5)



Pic.5

### **3. How to add the engine oil?**

Unlock the gearbox standard with the spanner, then add the grease through the hole.



Pic.6

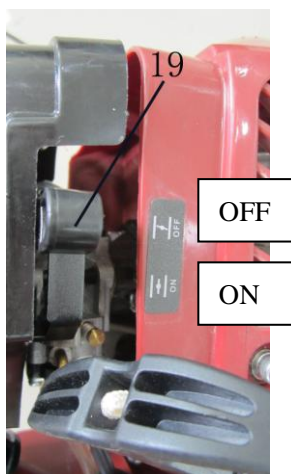


Pic.7



## V Start

1. Before first starting of the new-generation demolition hammer, repeat press the transparent fuel bubble (See Pic.4) to fully fill the Carburetor with fuel.
1. Close the air vent when the engine is in the state of cooling, but open the air vent only when the engine is heated.
2. Hold the operation handle with one of your hands and quickly pull the pulling handle for about 50cm with the other hand. Do not let the pulling handle go back freely in your repeat pulling, but hold it and put it down with its resilience to protect the starter.
3. Open the air vent completely when the gasoline engine is started.



Pic.8



Pic.9

## VI Run

1. After gasoline engine start, it should be low speed for 2 to 3 minutes, warm-up operation for the machine.
2. When the gasoline engine warm enough, according to the required impact energy to pull appropriate regulatory position.

Note: ① the new-generation gasoline demolition hammer use of the first 24 hours, the workload should be in low-speed in order to extent the service life.

②Just start poor lubrication of gasoline, do not accelerate quickly.

3. Select medium-speed gasoline engine run for the best.
4. Prohibit use gasoline hammer under the non-breaking with high speed operation.

## VII Stop machine

1. Pull scale position 0, idle running for 3-5 minutes.
2. Press the red button to stop, stop switch see Pic.6

## VIII Technical maintenance

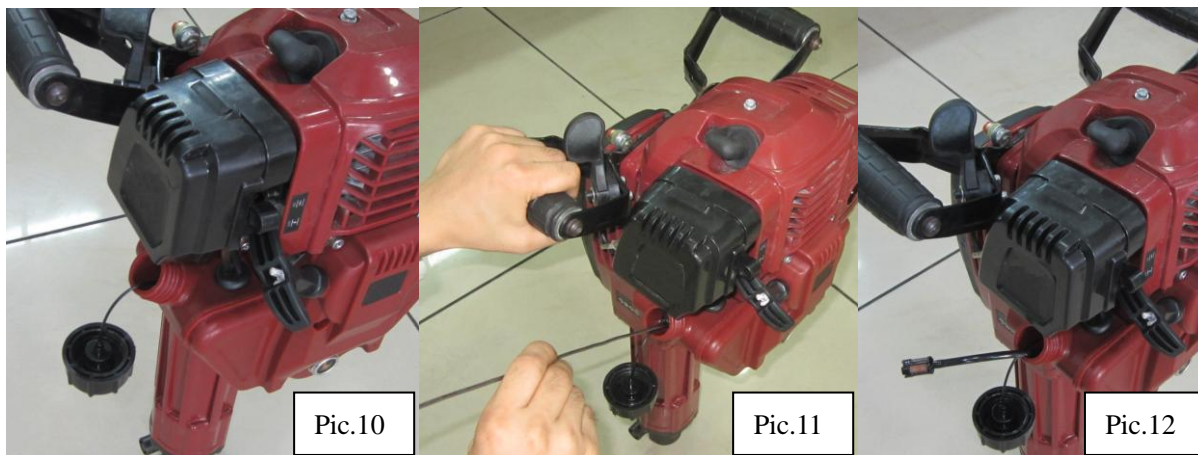
### 1 Air Filter

Check air filter regularly. Dust block on the cover of air filter will reduce engine power, cause cylinder short life. If the filter is very dirty, bur a mild detergent with warm water, wring dry, after cleaning the

filter should drop a few of oil on the dry and then install the air filter. Filter should be replaced if damaged, particularly if in the environment of much dust should be shorted maintenance cycle.

## 2 Fuel filter

If the fuel filter clogging, there will be speed slow, weak impact of the phenomenon of gasoline hammer. Method: ① Open the tank lid(See Pic.10) with metal hook(See Pic.11,12) take the fuel filter cleaning from the tank ②When cleaning the fuel filter, at same time clean the fuel tank.



## 3 Carburetor

Fuel tank and carburetor are generally left residual oil. A long time pass the residual oil will come into rubbish. And the rubbish will plug the oil line, causing the engine does not work. Therefore, when the machine is not used more than one week, be sure to completely take the fuel out. Take oil method: Repeat pressing the carburetor fuel bubble to drain the oil.

## 4 Spark plug

To ensure normal operation of the engine, spark plug gap to be moderate, with a wire brush to remove sediment. Reasonable spark plug gap 0.5-0.7 mm. See Pic.13



Pic.13

## 5 Muffler

Regular maintenance muffler, use a screwdriver to remove rubbish on the body or the rubbish on the coke muffler exhaust.

## 6 Centrifugal oil cup

Open the gear box cover, the eccentric shaft of the centrifugal oil cup is added regularly special butter.



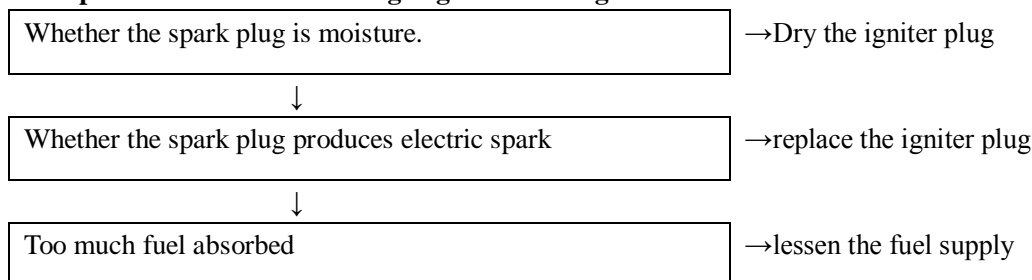
## 7 The cylinder heat sink

Regularly to remove dust, to ensure the cylinder cooling, this gasoline hammer is air-cooler type, if the cylinder dust accumulates on the heat sink will directly affect the cooling effect. Dust is easy to make the engine meet trouble.

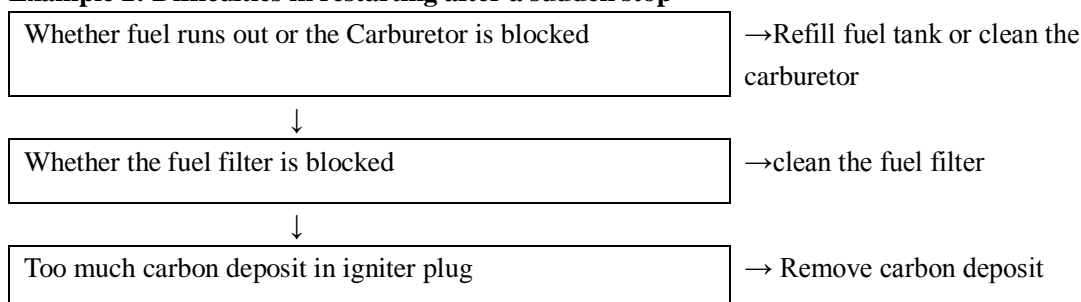
# IX Failure analysis and troubleshooting methods

## Problems analysis and solving

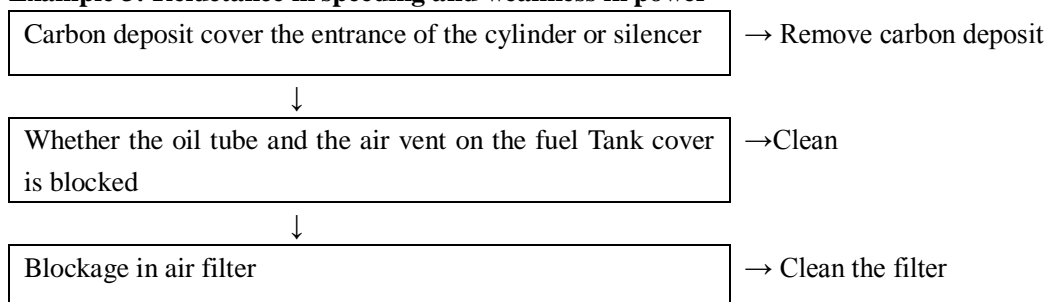
### Example1: difficulties in starting engine in cooling state.



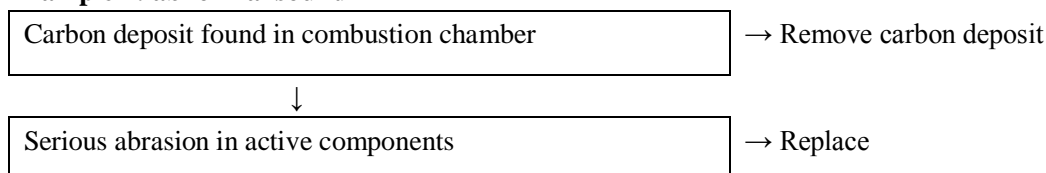
### Example 2: Difficulties in restarting after a sudden stop



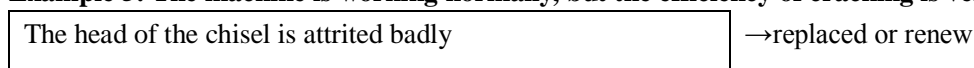
### Example 3: Reluctance in speeding and weakness in power



### Example 4: abnormal sound



### Example 5: The machine is working normally, but the efficiency of cracking is very low



Please contact with Sales Agency of the Crusher if your machine needs further mending.

## **X Product key data**

Model number	Snake Pro SP55
Hammer Type	Demolition Hammer
Engine type	44X34mm, Single cylinder, air cooling, 2 stroke
L×W×H(mm)	690×370×270
Fuel	mixing oil(gasoline 25, two-stroke engine oil 1)
Fuel tank capacity	1.7L
Weight	20.50Kg
Displacement	52cc
Max power and speed	1.7KW/6500r/min
Max torque and speed	3.5N.m/5000r/min
Consumption rate	≤0.6L/h
Impact frequency	700~1500BPM
Impact energy	20~55J
Carburetor type	H119-6A
Spark plug type	BM6A
Starter system	Hand pull start

## XI Maintenance Cycle

The following Data are given common use of the product. Suppose it is in worse working condition, such as thick dust in the air or much longer work hours for Crusher, the maintenance cycle should be shortened correspondingly.		Before woke	After work or every day	After Filling oil	Every Week	Every Month	Broken Down	If necessary
The whole machine	outlook check (state, stabilities of screws)	√		√				
	Cleaning		√					
Control handle/stop button	function check	√		√				
Air Filter	Clean				√			√
	Replace						√	
Fuel Filter	Check					√		
	Replace						√	
Petrol Tank/Petrol Tank cover	Clean		√	√				
	Check	√		√				
	Tighten							√
Gear Box/Hammer Box	Clean					√		
	Add oil							√
Lubricating Oil Tank	Check	√						
	Clean					√		
	Fill Oil							√
Chisel	Check Sharpness	√						
	Sharpen or Forge							√
	Replace						√	
Silencer	Check					√		
	Remove carbon deposit							√
Cylinder Cooling Fin	Check					√		
	Clean							√
lignite Plug	Check/Adjust Customize the distance between electrodes					√		
	Replace							√
Screw and Nut	Check	√		√				
	Tighten							√

## XII      Part list of YorQuip Snake Pro SP55 Demolition Hammer

No.	Part Name	QTY	No.	Part Name	QTY
1	Ring	1	34	Screw M5x35	4
2	Start Handle	1	35	Magneto Rotor Comp	1
3	Screw M5x20	11	36	Spring	1
4	Elastic Washer 5	21	37	Expander	1
5	Washer 5	21	38	Screw Pin	2
6	Lid Assembly	1	39	Pin B4x10	2
7	Fuel Pipe	1	40	Fan Cover	1
8	Plug	1	41	Washer 6	6
9	Fuel Pipe	1	42	Elastic Washer 6	6
10	Filter	1	43	Screw M6x25	4
11	Fuel Tank	1	44	Screw M5x15	1
12	Recoil Spring	1	45	Screw M6x60	2
13	Rope	1	46	Muffler	1
14	Start Rope Reel	1	47	Gasket	1
15	Start Spring	1	48	Ignition Coil Comp	1
16	Start Claw Assembly	1	49	Cord Comp	1
17	Nut M8	2	50	Screw M5x15	1
18	Start Reel	1	51	Cover Assembly	1
19	Gasket	1	52	Spark Cap	1
20	Piston	1	53	Cylinder	1
21	Circlip	2	54	Gasket	1
22	Piston Pin	1	55	Gasket	1
23	Piston Ring	2	56	Admitting Pipe	1
24	Crank Shaft	1	57	Screw M5x25	2
25	Bearing	1	58	Gasket	1
26	Crank Case	1	59	Carburetor	1
27	Gasket	1	60	Filter Net	1
28	Oil-seal	1	61	Choke Handle	1
29	Bearing 6202	2	62	Air Filter Cover	1
30	Key	1	63	Screw M5x50	2
31	Oil-seal	1	64	Bolt M5x15	6
32	Pin B5x12	2	65	Washer	1
33	Crank Case	1	66	Throttling Cock Cover	1

No.	Part Name	QTY	No.	Part Name	QTY
67	Throttling Cock Spanner	1	99	Seal Collar	1
68	Throttling Cock Spring	1	100	Gear Box	1
69	Throttling Cock Base	1	101	Real Gasket	1
70	Nut M5	3	102	Connecting Rod	1
71	Bolt M8x30	2	103	Igniter Plug	1
72	Washer 8	2	104	Double Lip Seal Packing Collar	1
73	Nut M8	2	105	Hammer	1
74	Handle Spring	2	106	Hammer Holder	1
75	Rubber Handle	2	107	Washer 8	10
76	Control Frame	1	108	Bolt M8x35	4
77	Stop Button	1	109	Filling Piece	2
78	Washer 6	16	110	Small Damping Ring	1
79	Bolt M6x25	10	111	Split Ring	1
80	Bearing 6203/P5	2	112	Piston Pin	1
81	Driving Pulley	1	113	Split Ring Rubber Circle	1
82	Middle Axis	1	114	Rock Drill Base	1
83	Circlip for Hole 40	1	115	O-Circle 23.6x5	1
84	Circlip for Axis 17	1	116	Big Damping Ring	1
85	Eccentric Wheel Series	1	117	Front Gasket	1
86	Bearing 6204/P5	1	118	Chisel Base	1
87	Bearing Plate	1	119	Chisel Pin	1
88	Bolt M5x10	4	120	Bolt M8x30	6
89	Big gear	1	121	Spring Holder	1
90	Bearing 6202/P5	1	122	Washer	1
91	Inflating Plate	1	123	Soft Washer	1
92	Bearing 6205/P5	1	124	Spring Elastic Ring	1
93	Eccentric Wheel Series	1	125	Cylindrical Pin 4x8	1
94	Needle Bearing 18/20B	1	126	Seal Collar	1
95	Filling Piece	1	127	Front Cover of The Gear Box	1
96	Hexagonal Screw M8x20	1	128	Screw M5x20	6
97	Indication of Oil	1			
98	Lubricating Oil Tank	1			



## XIII Contact data

### Address

Molenlei 2 j  
1921 CZ Akersloot  
The Netherlands (EU)

### Postal address

Boekel 31 c  
1921 CE Akersloot  
The Netherlands (EU)

### Contact

Phone +31 (0)72 5401001

Fax +31 (0)72 5401002

E-mail info@snstrade.nl

Website: www.yorquip.com

Peter Smit - Sales

Mobile + 31 (0)6 53701658



European Distributer:

Smit & Smit International BV  
Molenlei 2  
1921 CZ Akersloot  
The Netherlands, EU

### EC DECLARATION OF CONFORMITY

Smit & Smit International BV declares that the machine:

* Trademark.....	- Yorquip
* Model.....	- Snake Pro SP55, Gasoline Demolition Hammer
	• Engine Displacement: 52cm <sup>3</sup>
	• Max. Engine Power: 1.7kW/6500/min
	• Max. Engine Speed: 7800min
* Manufacture year.....	- 2014

### IS COMPLIANT

To the following directive: - Council Directive 2006/42/EC (not Annex IV equipment)

and is also compliant to the following applicable standards:

- German Product Safety Act section 20 to 22 ProdSG
- EN ISO 12100:2010

Special Conditions: - This certificate will be valid until 19 November 2017

Surname.....	- Smit
Name.....	- Christian
Position.....	- Director

Akersloot, November 1<sup>st</sup>, 2014

Signature

